Amendments to the Claims

The following listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims

1. (Currently amended) A method of optical communication comprising:

providing a plurality of ~~an~~ optical signals ~~signal~~;

providing a plurality of data signals;

providing a plurality of optical modulators, each of the plurality of optical modulators:

receiving one of the plurality of optical signals and one of the plurality of data signals;

passing a ~~plurality of~~ desired ~~portions~~ portion of the received optical signal ~~using a plurality of respective optical modulators~~, the passed desired ~~portions~~ portion of the received optical signal ~~individually~~ having at least one predefined wavelength;

optically modulating the passed desired ~~portions~~ portion of the received optical signal ~~using the respective optical modulators and~~ responsive to ~~respective ones of~~ the received data signal to provide an optically modulated passed desired portion of the received optical signal ~~signals~~; and

outputting the optically modulated passed desired ~~portions~~ portion of the received optical signal to an optical communication medium ~~after the modulating~~.

2. (Currently amended) The method of claim 1 wherein ~~the~~ optically modulating the passed desired portion of the optical signal comprises frequency modulating the passed desired ~~portions~~ portion of the optical signal ~~using the respective optical modulators~~.

3. (Currently amended) The method of claim 1 wherein the ~~passing comprises passing~~ at least one predefined wavelength ~~the desired portions of the optical signal having respective~~ is different w~~avelengths~~ from the at least one predefined wavelength of desired portions of optical signals passed by others of the plurality of optical modulators.

4. (Currently amended) The method of claim 1 wherein ~~the receiving comprises receiving within~~ each of the plurality of optical modulators ~~having~~ has ~~respective~~ a different pass band ~~bands~~, and wherein the passing and the optically modulating comprise passing and optically modulating the desired ~~portions~~ portion of the optical signal within the ~~respective~~ pass ~~bands~~ band of the ~~modulators~~ optical modulator and not passing and not optically modulating other portions of the optical signal outside of the ~~respective~~ pass band ~~bands~~.

5. (Currently amended) The method of claim 4 further comprising filtering the other portions of the optical signal using the optical modulator ~~modulators~~.

6. (Canceled)

7. (Currently amended) The method of claim 1 wherein providing a plurality of optical signals comprises ~~further comprising~~:

dividing ~~the~~ a source optical signal into the ~~desired~~ plurality of ~~portions~~ of optical signals~~; and~~

~~providing the desired portions to the respective modulators~~.

8. (Currently amended) The method of claim 1 further comprising combining the optically modulated passed desired portion ~~portions~~ of the optical signal of each of the plurality of optical modulators before the outputting, ~~and~~ wherein the ~~outputting comprises outputting the desired portions to the~~ optical communication medium comprises ~~comprising~~ an optical fiber.

9. (Original) A method of optical communication comprising:

providing an optical signal;

providing a data signal;

receiving the optical signal and the data signal within an optical modulator;

encoding the data signal upon at least portion of the optical signal by optically modulating at least the portion of the optical signal using frequency modulation; and

outputting at least the portion of the optical signal to an optical communication medium after the encoding.

10. (Currently amended) The method of claim 9 wherein ~~the receiving comprises receiving the optical signal within~~ the optical modulator ~~comprising~~ comprises a filter having a pass band, and wherein the encoding comprises frequency modulating at least the portion of the optical signal within the pass band.

11. (Currently amended) The method of claim 10 further comprising filtering other portions of the optical signal outside of the ~~passband~~ pass band using the optical modulator.

12. (Original) The method of claim 9, wherein the receiving comprises receiving at least the portion of the optical signal within an optical modulator having a filter frequency, and the encoding comprises frequency modulating the filter frequency.

13. (Currently amended) An optical communications method comprising:

dividing a source-light beam into plural carrier-light beams;

modulating said carrier-light beams responsive to respective data signals to yield plural encoded-light beams, wherein said encoded light beams have different respective encoded-light wavelengths; and

combining said encoded-light beams to yield a multiplexed-light beam, wherein said combining step comprises frequency-multiplexing said encoded light beams.

14. (Original) The method of claim 13 further comprising injecting said multiplexed-light beam into an optical communication channel.

15. (Canceled)

16. (Currently amended) The method of claim ~~15~~ 13 wherein said carrier-light beams share a common carrier wavelength.

17. (Currently amended) The method of claim ~~15~~ 13 wherein said carrier-light beams have different respective carrier-light wavelengths.

18. (Original) The method of claim 17 wherein each carrier-light wavelength of a respective carrier-light beam is closer to the encoded-light wavelength of the respective encoded-light beam that to the encoded-light wavelength of any other of said encoded-light beams.

19. (Currently amended) An optical communication system comprising:

a plurality of optical modulators adapted to optically couple with ~~an~~ a plurality of optical ~~signal~~ signals and an optical communication medium, ~~and~~ wherein ~~individual ones~~ each of the plurality of optical modulators are configured to:

receive a data signal;

pass a desired portion of the coupled optical signal, the desired portion having at least one predefined wavelength;

optically modulate the passed desired portion of the coupled optical signal having the at least one predefined wavelength responsive to the received data signal to provide an optically modulated passed desired portion of the coupled optical signal; and

output the optically modulated passed desired portion of the coupled optical signal ~~after the modulation~~ for application to the optical communication medium.

20. (Currently amended) The system of claim 19 wherein the optical modulators are configured to frequency modulate the desired portions of the coupled optical signal.

21. (Currently amended) The system of claim 19 wherein the optical modulators are configured to pass the desired portions of the coupled optical signal having respective different wavelengths.

22. (Currently amended) The system of claim 19 wherein the optical modulators have respective different pass bands, and the optical modulators are configured to pass and to modulate the desired portions of the coupled optical signal within the respective pass bands and to not pass and to not modulate other portions of the coupled optical signal outside of the respective pass bands.

23. (Currently amended) The system of claim 22 wherein the optical modulators are configured to filter the other portions of the coupled optical signal.

24. (Canceled)

25. (Currently amended) The system of claim 19 further comprising a divider configured to divide a source optical signal into the plurality of coupled optical ~~signal~~ signals ~~into the desired portions and to provide the desired portions to respective ones of the optical modulators~~.

26. (Currently amended) The system of claim 19 further comprising a combiner configured to receive the optically modulated passed desired portions of the coupled optical signal from the optical modulators, to combine the optically modulated passed desired portions, and to provide the optically modulated passed desired portions to the optical communication medium, wherein the optical communication medium comprises ~~comprising~~ an optical fiber ~~after the combining of the desired portions~~.

27. (Currently amended) An optical communication system comprising:

a light source for providing a source-light beam;

an optical divider for converting said source-light beam into plural carrier-light beams;

a modulator array for converting said carrier-light beams into encoded-light beams, said modulator including means for receiving plural data signals, said modulator array converting each of said carrier-light beams into a respective one of said encoded-light beams as a function of a respective one of said data signals, wherein each of said encoded-light beams has a respective encoded-light wavelength, no two of said encoded-light beams having the same encoded-light wavelength; and

an optical combiner for combining said encoded-light beams to yield a multiplexed light beam, said optical combiner frequency multiplexing said encoded-light beams to yield said multiplexed-light beam.

28. (Original) The system of claim 27 wherein said optical combiner injects said multiplexed-light beam into an optical communications channel.

29. (Canceled)

30. (Currently amended) The system of claim ~~29~~ 27 wherein said carrier-light beams share a common carrier-light wavelength.

31. (Currently amended) The system of claim ~~29~~ 27 wherein said plural carrier-light beams have respective carrier-light wavelengths, no two of said carrier-light beams having the same carrier-light wavelengths.

32. (Original) The system of claim 31 wherein the carrier-light wavelength for each of said carrier-light beams is closer to the encoded-light wavelength of the respective encoded-light beam than to the encoded-light wavelength of any other encoded-light beam.

33. (New) The method of claim 1 wherein the plurality of optical signals have different wavelengths.

34. (New) The method of claim 1 wherein the plurality of optical signals have the same wavelengths.

35. (New) The system of claim 19 wherein the plurality of optical signals have different wavelengths.

36. (New) The system of claim 19 wherein the plurality of optical signals have the same wavelengths.